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CONTINUED EXTENSION IN MUSCULAR DEFORMITIES.

By Henry G. Davis, M. D.

[Read before the N. Y. Medical Journal Association.]

Although the subject of this paper may appear trite to many in the profession, yet we hope to render it interesting by reason of the practical use to which we shall apply it.

As the term extension has long been familiar as a surgical term, but in a sense very different from that in which it will be used in this paper, it becomes necessary to define its import. To do this in as concise a manner as possible, we prefix to it "continued." We have been heretofore, in the habit of using the term elastic, but here substitute *continued*, as conveying more directly an idea of the process. Therefore, whenever the term extension is used, we mean by it *continued extension*, or a constant pulling, in distinction from pulling to a certain point and there fixing the part extended, as is the fact when the screw is the extending medium. This distinction is of the utmost importance, and is the distinguishing characteristic of *the* mode of effecting extension, which we had the privilege of introducing to the notice of the profession many years since.

By the former process, the parts after being brought tense by the screw, remained thus fixed until changed by some person.

On the contrary, when continued extension is applied, the parts are being pulled unremittingly.

It is a well established physiological fact, that muscular fibre must be allowed alternate relaxation; if it is not, the muscle soon becomes exhausted and loses its power of contracting, consequently a continual pulling must exhaust, and overcome any muscle, when the force is in proportion to the power of such muscle.

We have thus far spoken only of the effects of continued extension upon muscle in reference to its contractile quality.

There is another effect of continued extension, equally or more important, in which all the soft tissues share in common, tendon and ligament being no exception. I wish to be understood as distinctly stating it as a law, that, if the soft tissues are maintained unremittingly tense, they actually elongate. Let it be remembered that this elongation takes place only when they are tense. It is not essential for our purpose that we should be able to show how they elongate. Our theory is, that the new material being deposited unorganized, when it becomes so, must be more lax than the old fibre which is put upon the stretch, hence there must necessarily be a gradual gain; but the manner is immaterial so long as the fact remains, of which we can take advantage.

In order that these fundamental principles may the more easily be remembered, we will put them in the form of propositions.

1st. That muscular fibre if placed under a continual pulling force (continued extension) loses its contractile power, by reason of exhaustion.

2d. That all of the soft tissues, ligamentous and tendinous fibre not excepted, when kept unremittingly tense, do actually elongate.

3d. If any of the soft tissues are placed unchangeably in a lax condition, they actually shorten.

The last proposition it will be observed, is the converse of the second, and in surgery is of equal importance with it.

In deformities, for instance, it is as important that the soft tissues already at an unnatural length should shorten, as that those preturnaturally shortened should be lengthened. The results of elastic extension under such circumstances, gives us one of those beautiful reciprocities in mechanics that so often surprise us. They seem to come to our aid just at the time necessary to enable us to accomplish two results from the operation of one process.

As I claim the application of this mode of making extension as a *remedial measure* in diseases of the joints, through all their stages, also when there is disease external to the joint, if such disease compel the patient to retain the joint in a fixed position, it is requisite that every thing that has nearly approached this plan,

should be candidly stated. The only instance in which continued extension was employed during the progress of disease in a joint, prior to its adoption by me, which I have found recorded in medical history, was by Sir Benjamin Brodie, in his work on diseases of the joints.

Before detailing the manner of making the extension, he gives the principles upon which he bases his treatment, in the following language: "*It is absolutely necessary in the treatment of ulcerated joints, that the patient should be confined to the bed, &c.*" and "*Some contrivance may be employed having for its object to maintain the diseased joint in a state of absolute immobility, and this should always be regarded as one of the principal points to be attended to in the surgical treatment.*" Thus it appears, that, *whatever the apparatus used*, Sir Benjamin Brodie regarded *absolute immobility* as the object desired.

This is mentioned to show, that although he afterwards, in one case, speaks of extension by a cord, weight, and pulley, it was without the idea of separating the diseased surfaces of the joint, or of employing it as a remedial measure. The latter is evident from the fact that he did not continue its use; neither has any member of the profession employed it since his time, so far as we have been able to discover.

The passage referred to in Sir Benj. Brodie's work, is this:

"*At a later period* (of the disease) *when, in consequence of the extensive destruction of the articulation*, the muscles begin to cause a shortening or retraction of the limb, I have found great advantage to arise from the constant application of a moderate extending force, operating in such a manner as to counteract the action of the muscles." It is evident from this statement, that this eminent surgeon did not recognize the pathology upon which continued extension is founded, and the same may be said to be as equally true of the profession since his time.

It was in consequence of the discovery that it was the pressure upon the diseased surfaces of joints, (and first noticed in those of the vertebral column), that gave rise to those severe neuralgic pains so peculiar to this affection, that we were led to the adoption of continued extension as the most efficient means for counteracting the action of the muscles producing the pressure, and at the time it was adopted by us (twenty-five years since), we were not aware of this passage in Sir Benjamin Brodie's work.

Continued extension can be applied advantageously for a large variety of maladies.

1st. To fractures, whenever extension is required. It entirely overcomes the contraction of the muscles, keeping them in a state of perfect rest, maintains the parts at their original length; confines the fractured bones in their normal positions, employing the soft tissues surrounding the fracture, as coaptating splints; it removes almost entirely the pain, irritation, and injury resulting from the points of the fractured bone, passing into, and wounding the tissues with which they come in contact. When the bone is comminuted and not separated from the enveloping tissues, this mode of extension uses the soft tissues connected with these fragments as so many threads to draw them to their places. In a compound fracture, this extension compels the straggling parts to come into position, thus putting them in the most favorable position possible to unite by the first intention. This mode of extension saves the patient much suffering, and consequently aids in removing an element that may endanger life. In severe injuries, this relief from pain is of incalculable value, and we fear its importance is not always sufficiently considered by the surgeon.

This mode of making extension in fractures, was *urged* by us upon the notice of the profession, in the columns of the *American Medical Monthly*, published in New York city, in the early part of the year 1856.

In fracture of some of the bones, as the patella, the processes, etc., etc., also, in diseases of some of the joints, the ankle for instance, it is difficult, and sometimes impossible, to make the extension from the bone separated, or from the parts beyond the joint. In such cases the adhesive straps can be applied over the bellies of the muscles to be overcome, then the extension made by means of the adhesive straps. Extension by this process is more effectual in overcoming the contraction of the muscles, than when made from the parts into which the muscles are inserted. In treating fracture of the patella, the parts are left so free that they can be raised by the fingers and moved in any direction. Consequently, it requires but a slight force to keep the fractured parts in apposition.

Detailed descriptions of the application of this mode of applying extension, accompanied with cuts, will be found in my work upon Conservative Surgery.

Dislocations.

In recent cases this plan of extension may not be necessary, as most of them can be readily reduced by manipulation, or in connection with temporary extension. It is in cases of long standing, when the ligaments, muscles, and all the

surrounding tissues have become actually shortened, that continued extension affords us the only sure and safe means of effecting a reduction.

It will be recollected that our second proposition was, that all the soft tissues, (ligaments and tendinous fibres not excepted,) when kept unremittingly tense, do actually elongate. Here, then, we are in possession of sure means, by which we can overcome all the obstacles to the reduction of any dislocation, of however long standing. We have reduced luxations of the hip into the thyroid foramen, and upon the dorsum of the ilium of four, six, and in one case of fourteen years standing. A dislocation of twenty years can be reduced with as much certainty by this plan, as one of twenty minutes by any other process. The certainty of an equally good joint in each case, of course, is not to be expected.

This mode of extension meets a class of cases that heretofore have been in a measure beyond the reach of our art. I allude to congenital dislocations. In these, the muscles and the weight of the body are constantly forcing the dislocated portion of the joint further and further from its normal locality. This is particularly the case in congenital dislocation of the hip. By continued extension these dislocations can be reduced, yet they do not afford the same encouragement for a good joint, that is given when the dislocation occurs after the parts are fully formed. In congenital dislocations there is frequently a deficiency of some of the integral parts of a joint. After the limb is brought down to its full length, it should be maintained there unchangably, while at the same time, *very* free and frequent passive exercise should be given it, in order that the parts may become so consolidated, as to perform all the functions required of them.

Deformities.

In this class of difficulties, we have a large field for the application of extension, as most of them are dependent upon some abnormal condition of the soft tissues. In a large majority, the muscles, ligaments, etc., upon one side are actually shortened, and any attempt to restore the parts to their normal position is met by the resisting force of these tissues. Formerly, it was considered imperatively necessary to divide these tissues, hence tenotomy, and myotomy, etc., came into fashion. By means of continued extension, all this cutting is avoided, and what is of more consequence, we can now accomplish two essential processes at the same time, to wit, lengthen the tissues, and while this is being accomplished, the tissues that *would* become lax in consequence of the restoration of the bony structure to its normal position, are not reproduced at their former length; the result is, that all the soft tissues involved in the deformity, gradually assume their normal length as the bony structure is brought into position.

This change is productive of the most admirable results in the treatment of the various forms of talipes. By this mode, the muscles in talipes that have ceased to perform their functions, can be brought into position and exercised until they acquire their full strength. As the brain ceases to recognize muscles that are thrown out of use, whether by position or other cause, we can conceive of no other way in which a case of talipes can be perfectly restored. In order that those muscles that are physiologically paralysed may be functionally restored, they should be unrestrained by apparatus, for the inability to use them, in consequence of their malposition, has been the reason why the brain has ceased to affect them. When untrammeled, they can be educated and their function recovered. These are important considerations, for by them we are enabled to restore both form and function, whereas by the old process only the form could be restored without the function.

Time will not permit of giving in this place the mode of treating the varied deformities dependent upon a change in the soft tissues. If any one is sufficiently interested in this mode of treating deformities to pursue it in detail, they will find in my work recently published by the APPLETON'S, entitled Conservative Surgery, a variety of illustrations of the appliances necessary for carrying it out.

It will be noticed that all deformities dependent upon a changed length of the soft tissues, are amenable to this process.

Joint Diseases.

The profession are more familiar with the treatment of disease in the joints by continued extension, than with its application for any other purpose. So great is the relief afforded by this form of extension in the disease of the joints, that it may be said to allay every important symptom. To fully appreciate the advantages derived from it, it is necessary to understand distinctly the principal urgent symptoms which the extension removes. Allow me first to state, that the pressure upon the diseased surfaces is caused principally by the action of those muscles that are so placed in reference to the joint diseased, that firmly bring the opposing surfaces of the joint in contact during their contraction. This pressure not only gives rise to the severe neuralgic pains, but it prevents the nutrition of

the parts pressed upon, a process similar to that going on in the production of a bed-sore; consequently, it is an ever-present destructive agent in these cases; and so long as the pressure continues, it would appear impossible that any restoration could take place in the parts pressed upon.

Continued extension, by fatiguing the muscles, entirely removes the pressure, and this removal relieves the agonizing pains so peculiar to ulcerated joints, while at the same time the separation allows the ulcerated surfaces to heal. After the pain and irritation is relieved, the patient is enabled to rest quietly; has a refreshing sleep at night; the appetite is restored; food is enjoyed, and the body is nourished by it. There is no mechanical hindrance to the restoration of the diseased parts, and as the pain and suffering are removed at the same time, we have to contend only with the innate constitutional difficulties.

The separation of the diseased surfaces in ulcerated vertebral joints, is as essential as in those of the knee or hip. The mode of effecting it in the spinal column is different, inasmuch as each vertebra has two points of support anteroposteriorly, and as the posterior supports, (the oblique processes,) are seldom, if ever, diseased, we can throw the weight of the body above the diseased vertebra upon these healthy supports. This mechanical arrangement of the vertebra, as affording the foundation for a new mode of mechanically treating Potr's disease, we believe was first pointed out by us, and it has been the basis of our treatment of this disease for the last twenty years. In the March number of the *American Medical Monthly* for 1856, published in New York, pages 210—14, in a paper on *Deformities and their Remedy*, we used the following language: "The common mode of constructing apparatus to sustain the weight of the body upon crutches is utterly useless, as the crutch impinges directly against the bundle of blood-vessels and nerves that meet in the axilla, upon which, not even the weight of the arm can be borne, much less that of any additional portion of the body." In the May number of the same journal, page 327, we state that the body and oblique processes afford the only perpendicular support to the spine, etc. Then it is stated further, that it is this form of the vertebra which enabled us to make use of the whole spinal column as a *lever*, to restore it. "*By apparatus, we are enabled to throw the entire weight of the superincumbent body upon the oblique processes, and thereby separate the bodies of the vertebra adjoining that diseased from it, the contact of which were constantly irritating each other, and producing absorption. This replacement is advantageous, not only in restoring the figure, but by the removal of all mechanical irritation and pressure.*" These facts are here mentioned in consequence of a statement made in a paper read before the New York State Medical Society at its annual meeting in 1863, by Charles Fayette Taylor, M.D., of New York. He there not only fails to mention the previous publication of these views of the pathology and the mechanical treatment based upon it, but says: "In all the instruments which I (Taylor) have examined, there has been but one idea on which their construction has been based. All these instruments are made with the one idea of making counter-extension from the hips to the shoulders. From a band around the waist, or resting on the hips, some form of *crutches* are erected to the armpits, and upon this slight support has all the relief to be derived from instrumental aids depended." This statement is made by Dr. Taylor, notwithstanding the fact that we had for the last twenty years made use of the spinal column as a lever, and our apparatus as another, and this was done *without any form of crutch.*

This is brought to the notice of the profession as a matter of history.

In joint diseases, if continued extension is applied through all their stages, and with sufficient force to separate the surfaces of the diseased bones, there will seldom be found so great a quantity of pus as to require an external outlet; the absorption will be equal to the secretion.

In order to effect the best results by extension, it should be sufficient to separate the diseased surfaces; it should be constant, and if possible, never interrupted until the ulcerated surfaces have been for some months healed.

If the inquiry is made, what proportion of cases of ulcerated joints can recover without the loss of the joint by this mode of treatment, the answer would be, judging from our experience, that a large majority would be left with a useful joint, provided the treatment by continued extension is applied in the first stages of the disease, and most of them, even after the destruction of the cartilages.

Extension can frequently be employed to advantage in the preparation of parts before a surgical operation for the removal of an unsightly or inconvenient cicatrix arising from a burn or other cause. By elongating the skin for several days or weeks by means of continued extension, a much smaller amount of new material will be necessary to supply the place of that removed, and in such cases the parts might be brought to-

gether, after the removal of the cicatrix, without the addition of any new material. In operations for hare-lip, when the parts are so deficient as to endanger the success of the operation, by reason of the strain upon the stitches, the operation would be rendered much more certain and easy, if the parts were first made lax by approaching the soft parts by means of extension by adhesive strips.

In those cases where the teeth are imperfect in front and the mouth is flattened, it will be advisable to prevent a further compression by placing a segment of a circle of thin metal or wood over the flattened parts to prevent further compression while the extension is in progress.

There remains one other important application of continued extension, to which I would invite your earnest attention.

In 1854, a paper was published in the *American Med. Monthly*, of this city, in which I described in detail the philosophical mode of developing the chest. I would again call your attenattention to the subject, to show that the principle involved in my first proposition is the one upon which we are to rely in making efforts to enlarge the cavity of the thorax. In the first place, a portion of the act of respiration is simply a mechanical one. The ribs and diaphragm are so placed and arranged, that by the act of inspiration a vacuum is produced, into which the air rushes, for the same reason that it enters any vacuum, and not from any power we possess of drawing in the air, as would appear from popular phraseology. It follows then, that the larger the vacuum we are able to produce, other things being equal, the greater the amount of air that will enter to fill it, and consequently the air-cells of the lungs. It is for the purpose of increasing the ability to produce this essential part of the act of respiration that I would make use of extension. My third proposition was, if the soft tissues remain unremittingly lax for any considerable length of time, they actually shorten.

It follows then, if a man with a thorax that will enlarge by inspiration until a vacuum of sixty cubic inches is produced, should for any reason fail for months or years to raise it above a capacity of forty cubic inches, he will in the end lose the use of his chest to the extent of twenty cubic inches. This result would follow as certainly in a chest originally large, as in one much smaller, hence an originally large chest may become so confined as to limit its capacity, when extended, to a less volume of air than one much smaller that is unrestrained in its expansion. This fact should be kept in remembrance, because it is sometimes asserted that persons with large chests originally, die with phthisis; by this we can see how it may occur. It is not the size of the chest *per se*, but the difference between its internal dimensions during the act of expiration and that of inspiration, as this difference is its capacity for receiving air. It is for the purpose of liberating the ribs, and thereby allow of their being raised to that point which will give the largest dimensions to the cavity of the thorax, that I would apply continued extension. It is not unfrequently remarked by the profession, that such a person will not die of phthisis, because he has so large a chest. Why then should not the chest of every person, when the muscles, ligaments, etc., are elongated so as to admit of expansion to its fullest capacity, be a good guarantee against phthisis?

The muscles inserted into the arm and scapula, that arise from the ribs and sternum, are so many fastenings by which we can hold the chest expanded, and thereby enlarge it by extension. We have seen the circumference of the chest, by extension through the arms, increased several inches in a few weeks. The reception of this additional amount of air increases the power to assimilate food in the same proportion. We have no doubt many cases of habitual dyspepsia are owing in a great measure to an insufficient respiration. Did time permit, this subject would be found extremely interesting in detail.

Thus I have presented some of the principal purposes to which continued extension has been applied, together with its advantages, but its full value to our profession as an aid in overcoming many of the difficulties that come under our cognizance, cannot at present be fully appreciated.

A CASE OF TYPHUS FEVER WITH CEREBRO-SPINAL SYMPTOMS, AND INTERCURRENT PNEUMONIA OF THE APEX OF THE LUNGS.

By Jos. Adolphus, M. D.,
Of Hastings, Michigan.

Willie ——, a boy æt. 10, of feeble constitution, pale and puny, of a nervous lymphatic temperament, dark blue eyes, iris large and open, fair complexion, light brown hair, is of weight, in ordinary health, 96 pounds.

I was called to see him Dec. 3d, 1866. He had then been ill six days, and under the care of another physician, who had discontinued his visits believing the case hopeless.

The condition of the case when I saw it, was that of a low grade of typhus fever with the peculiar macular eruption; heat of skin, disturbed mental faculties, and frequency of pulse. Wine, beef-tea, and milk, were immediately ordered, and the body was sponged with acetic acid and

water, which treatment lowered the pulse four beats, lessened the pungent heat of skin, and reduced the delirium somewhat by the 5th.

6th. I was called in haste to see the boy, and found cerebro-spinal symptoms coming on. He had complained during the night of headache, which gradually grew more severe, attended with nausea, and he vomited once. He then complained of rachialgia. The spine was quite sensitive to pain. He soon commenced making a loud noise, which was in an hour or two followed by rigidity of the muscles of the neck and back, which resulted in contraction. On the surface of the abdomen, neck, and back, were seen a few livid petechial spots. The pulse was not increased in frequency above what it was the day before, nor was the skin any hotter.

The treatment that was adopted at this juncture, was that which has been usual with me I gave forthwith, a tea-spoonful of saturated tincture of green root of the gelseminum, and ordered beef essence enemas. On the fourth dose of the gelseminum, after hourly repetitions, the nervous symptoms were reduced, but exchanged for those of a different character; eight hours later, in place of the muscular rigidity, delirium, noise, and furiousness, stupor came on.

8th, 7 A.M. I saw the boy and found the violence of the preceding day changed to another condition, so opposite, that I was not a little surprised. His condition at this time, was that of the lowest condition of the worst grade of typhus. The boy lay dull and stupid, pupils widely dilated; pulse 120; respiration 36; skin hotter; body covered with petechial spots; tongue dry, brown, and *broad;* breath offensive; sordes on teeth. These symptoms were fully developed by 11, P. M., on the 9th, at which time he was passing the contents of the rectum and bladder, unconsciously in bed. Constant movement of fingers, hands, and arm, picking the bed clothes and in the air. Occasionally a sigh or a moan would escape him.

10th. The above symptoms were fully developed by noon. At 8 P.M., it was with difficulty that he was aroused, and then he would make no intelligible answers to questions. The pulse was weak, and frequent, heart's action labored.

At noon on the 9th, he was ordered.

℞.	Chloroform,	f℥ij.
	Morph. acet.,	gr.ij.
	Tinct. cannab. Ind. (saturated),	♏xx.
	Ol. menth. pip.,	♏v.
	Cimicifuga, (saturated),	
	Glycerine,	āā f℥iij. M.

Of this twenty drops were given every hour.

The beef essence and milk still kept up.

Under the above treatment, all the symptoms remained unchanged for thirty-six hours.

But I should remark here, that during this time, the *pupils gradually contracted* under the above treatment, which indeed, was the first symptom, so far as I could see, and the only one that manifested any change for thirty-six hours under the chloroform treatment.

11th. Symptoms somewhat changed. The boy was more conscious, the petechial spots not so livid, and had faded very much both in color and size. Pulse, tongue, and heat of skin, as before. The dose was then reduced to ten drops every hour.

12th. Nervous system much more braced, the jerking movements of hands and arms very much diminished, and the picking in the air and clothes very nearly ceased. Pupils considerably smaller, and he complains of the light hurting him; pulse, at 8, P.M., a little stronger and fuller, and less frequent by six beats.

13th. This morning the boy complains of a frontal headache again. Pulse more frequent and respiration more hurried. Ordered an enema of broth, ℥vj. sodæ, sulphite, ℥j. He retained the enema three hours. It was then repeated, and his bowels were moved half an hour after, no motion having occurred since the eleventh.

14th. Breathing more hurried; pulse quick and sharp, 124; a little cough.

6, P.M. I detected intercurrent pneumonia on apex of left lung, involving four inches of tissue. Tinct. digitalis in two-drop doses was ordered; a mush-poultice over the whole chest; in fact the boy was encased in it. Poultice to be often renewed; carb. ammon. was mixed with them; which, I fancied had a most marked effect in making the boy comfortable, and increasing the activity of the skin.

15th. A little more crepitant rale this morning, and somewhat more resonant, but the difference is quite small. Ordered,

℞.	Quin. sulph.,	℥ss.
	Acid. hydro. chl.,	♏xxx.
	Glycerine,	f.℥xviij. M.

Teaspoonful every four hours, with four drops tincture of digitalis. At 10, P. M. ordered eight drops Magendie's, solution of morphia, to be repeated at 4, A. M.

16th. Rested better night previous and is quite refreshed; nervous symptoms nearly all gone; crepitant rale diminished; circumference of dulness decreased somewhat. Appetite improving; pulse 100; respiration 32; headache only occasional, tongue growing cleaner; skin more comfortable and relaxed; spots nearly all gone, pro

stration quite severe. The boy cannot turn himself in bed.

17th, 18th, 19th. Symptoms the same; improvement quite slow, pulse unsteady as far as frequency is concerned. Sometimes, it will rise to 110 from noon till midnight, and between then and 1, P. M. will fall to 95. This symptom of the pulse is often found in low fevers, just about convalescence.

20th Cough still harassing, and the prostration of the muscular system still prevails. From 20th to 25th complained all the time of headache, and restless at night; apex of left lung still involved, and but little if any improvement has occured up to this date.

Ordered this day, John C. Baker's cod oil, f.℥viij, lime water f.℥v, a teaspoonful four times a day.

28th. Much improved; pulse 96; respiration 30; headache nearly gone; appetite very much improved; cough less urgent; more resolution effected in lung.

Jan. 5th. Improvement very great indeed; cough nearly all gone; pulse 90; respiration 24; skin cool, and natural; eats and sleeps well—continue cod oil.

Jan. 15th. The boy is now all right, and can play about the house, though his emaciation is frightful. He is literally nothing but skin and bones; pulse 80; respiration 20; continue cod oil.

There is one symptom I omitted to mention, and that was strabismus of both eyes inward, but the left eye, very much more than the right. The cross eye is still to be seen, and is nearly as prominent now as four weeks ago. During the whole period of the disease, new milk, buttermilk, beef essence, hydrochloric acid, quinia, and glycerine, were used. The digitalis seemed to be of great service in maintaining the strength of the heart's action.

But the action of the cod oil was the most marvellous in restoring the integrity of the lung, and other tissues, and giving strength to the exhausted molecular life, and restoring the elements of repair and growth. The nervous prostration that came on after the cerebro-spinal symptoms were developed, could not be attributed to the gelseminum, inasmuch as that agent really arrested the violent symptoms, which no doubt would have progressed further and been more troublesome.

—— The resignation of Assistant-Surgeon Edward De W. Brenneman, who has been on duty at Gen. Grant's headquarters for a long time, has been accepted.

BLOODLETTING THEN AND NOW.

By C. H. Spillman, M.D.,

Of Harrodsburg, Kentucky.

Fully persuaded that a proper conception of the *modus operandi* of bloodletting as a therapeutic agent, is an important *desideratum* in our profession, I propose to throw together, in as small a compass as may be, the results of inductions drawn from observation and experience, with special reference to this subject, running through a period of 35 years.

Believing, as I sincerely do, that the prevailing doctrines on this subject are unphilosophical, and lead to disastrous practical results, I read, with much pleasure, Dr. Wilson's "Plea for the Lancet," in Vol. xv., No. 24 of the Reporter, as indicating a disposition on the part of the profession, to a more thorough examination of the subject, which, I doubt not, will lead to more rational views.

When I first came upon the arena in 1832, I was not long in becoming convinced that the lancet was used too indiscriminately, and sometimes to an injurious extent. I did not bleed as much as my neighbors, because I met with a number of cases that I could as easily and more safely control without than with it. In many others, however, it was a *sine qua non* to success.

How stands the matter now? Although diseases are the same, climate the same, morbific agencies the same; although organic structure is the same, vital susceptibilities the same, involving the same therapeutical relationships, pointing to the same indications of cure; yet such has been the revolution in the medical mind, that, at the present time, a large proportion of living practitioners rarely employ bloodletting as a remedial agent, and quite a number discard it altogether. Many of our late writers on therapeutics, if they justify its occasional employment, authorize it in such dubious phrase, with such admonitory qualifications and restrictions, as to clothe it in the garb of suspicion, and deter the junior members of the profession from its employment, even where indispensably called for.

I am not unaware of the fact, that the task before me is an ungracious one. It would have been more consonant to my feelings, could I have endorsed sentiments consecrated by so many justly distinguished advocates. To the popular doctrines on this subject, however, I find myself in a position of inexorable antagonism, by the logic of facts and figures which are impregnable. That more liberal enlightened views are demanded,

and will ultimately obtain, I have an abiding conviction; and, whenever medical men shall have divested themselves of the leaven of empiricism, to which that distrust in regard to blood-letting as a remedial agent, which now sways the popular mind, may be legitimately traced, and come to view this subject in the light of rational physiological principles; we shall then have a fuller appreciation of that powerful remedy, which, as Dr. Wilson justly remarks, nature claims as her own, and shall have made an important step, toward the highest attainable perfectibility of our art.

From one opinion, however, advanced by Dr. W., in his excellent paper, I must take the liberty of dissenting. That this prejudice originated with the non-medical public, I think, is exceedingly questionable; and if the Dr. will submit the matter to a thoughtful review, he will find the responsibility where least excusable, with those who ought to know better. My observation is, that the popular verdict stands opposed to medical inefficiency in that regard. Disguise it as you may, I apprehend it is accepted as a concession to the various shades of empiricism which flood our land, all of which have been weighed in the balances and found wanting.

There is no therapeutical agent, however valuable and indispensable to a successful exercise of our art, that may not be brought into disrepute by injudicious use; and a misapprehension which underlies the general prejudice which has obtained in regard to the lancet, relates to the principle on which it operates in the subversion of morbid action. Had it not been regarded as a physical agent, operating on mechanical principles, it would never have been confided to the hands of the ignorant, and we should have had fewer failures and miscarriages, which have contributed largely to this prejudice; for it is with this as it is with all other remedial agencies, the more powerful for good, the more prolific of evil, if misapplied. Employed as a vital agent, regardless of quantity, pushed to a given effect, by a practiced hand, under the guidance of a cultivated intellect, it is not only perfectly safe, but unquestionably the most potent remedial agent known to our art; nor can it be dispensed with, without surrendering to a weak vascillating timidity, compromising the most sacred obligations that can attach to a medical man, and greatly circumscribing the usefulness and efficiency of the medical art.

The argument against the lancet founded upon its supposed debilitating effects, is an abstraction, and not an induction from a careful observation of facts. On the contrary, every practitioner who has had an extensive experience in its employment, and witnessed its magical effect in the instantaneous subversion of the most violent forms of morbid action, appreciate it as a means of economising strength. In a sudden attack of either a congestive or inflammatory character, although the patient may have a feeling of great prostration, and is unable to put forth his strength, he is not weak. Take off the weight by which he is overborne for the time, and he is still strong.

"The giant," says an able writer, "that lies prostrate on the earth, mastered by superior power, has still a giant's strength, though he do not at that moment put it forth. Give him but the chance to throw off the load that keeps him down, and he will soon show you that he is not weak."

This is a very apt illustration of depressed vital action, misnamed debility, under the weight of disease. The intelligent physician will not be misled by the illusion. He will at once recognize this apparent debility, as the sympathetic influence of a dangerous lesion in some vital part. Although greatly diversified in the phenomena they present, according to the peculiarity of the tissues involved, and the manifold remote causes which give rise to them, I apprehend there are few maladies not characterized by inflammation or venous congestion, either of which, by sympathetic influences, may occasion great prostration. They may be sudden in their onset, or insidious and gradual in their approach. They may persist for some time in a simple state of functional disturbance, but ofttimes run rapidly into irremediable structural alteration. In the latter case, relief, if attainable, must be prompt and instantaneous. The practitioner, seeing the peril, and comprehending the situation, will find little room for temporizing. The most powerful means of equalizing the circulation and taking off the oppression, are called into requisition; and a philosophical view of the medium through which, and the manner in which, both morbific and remedial agents operate upon the vital economy, will at once suggest bloodletting as the most appropriate, because the most prompt and decisive means of accomplishing the object.

Irreconcilable as this may seem with that hypothesis, founded upon the mechanical philosophy, which assumes bloodletting to be a debilitant; it is nevertheless in strict accordance with the known therapeutical effect of that agent corroborated by the observation and experience of every one who has employed it, under

an intelligent recognition of the principle on which it operates, in the subversion of morbid action.

The whole gist of the opposition to bloodletting, is predicated in conformity with the hypothesis, that it is necessarily debilitating; and this arises from a misconception of its *modus operandi* as a remedial agent.

Although a low pulse speedily raised, a shrivelled surface filled out, cold extremities warmed up, equilibrium of circulation reinstated, lost strength restored, vital energy renovated, are phenomena which have been a thousand times observed to follow immediately on the intelligent employment of the lancet; and in multiplied instances such phenomena could have been elicited by no other means; it is nevertheless abandoned, on the ground of its alleged incompatibility with the assumed hypothesis.

Admitting the loss of blood to be intrinsically debilitating in a normal state of the system, and allowing our inability to reconcile this fact with its powerfully restorative effect in many forms of disease, the truth of which cannot be successfully controverted, it is no more seemingly paradoxical, than many well known facts with which the history of medicine abounds; and affords a striking exemplification of the practical value of the principle inculcated in Hoffman's Aphorism—"*Ars medica tota observationibus.*"

Quinia, in its nature and properties, is no less marked, intrinsically, as an excitant, than is the lancet a debilitant; and I apprehend the objector will find about as much difficulty in accounting, on philosophical principles, for the powerfully sedative influence of the former in controlling fever, as he will in reconciling the restorative influence of the latter, in diseases of depression, with its assumed debilitating effects.

To assume an hypothesis on insufficient data, and then reject every principle not in harmony with it, is unphilosophical.

It is a humiliating fact, that in the present imperfect state of our knowledge, much of our reasoning, inconclusive, and unsatisfactory, rises no higher than mere speculation. However gratifying the reflection that by a close observance and careful analysis of facts, much is known in regard to the therapeutical effects of many remedial agents, still there are doubtless a great variety of hidden, unobserved influencing circumstances, connected with pathology, and therapeutics, which, if known, would greatly modify our inductions.

From a carefully noted and patiently classified series of facts, running through a long period, during which, in disregard of the popular prejudice, I have employed the lancet, not only to subdue violent inflammation, but to take off the oppression, and restore the strength, in cases of the most profound congestion, I am prepared to bear testimony to its magic power as a therapeutic agent; and hesitate not to say, after a patient, persevering trial of all its reputed substitutes, that many such cases can be reached by no other means known to the profession.

The number of lives sacrificed to this prejudice against the lancet, compared with those who fall a victim to its use, I doubt not, is as a thousand to one.

Look at the fearful increase of chronic diseases since the lancet has been partially ignored, and the profession has become tender-footed on the subject of blood-letting. Or to furnish a still more striking illustration; go to those districts where empiricism in its various forms, having manufactured, now subsists upon this prejudice, and lay it to the line and plummet of rigid vital statistics, and you will find multitudes of invalids who ought to have been restored to soundness by a prompt energetic treatment, whose cure, in consequence of an inefficient, temporizing course, has been incomplete;—vestiges of disease still remain;—vital lesion still lingers, ultimately to develope itself in some chronic form; and the tenure on life simply prolonged a brief period.

It is probable that tubercular disease in its diversified forms, is more destructive to human life than all other maladies combined. The best lights reflected from pathological anatomy, note it, as a product of inflammation. A patient investigation of the etiological history of very many of these diseases, rarely fails to reach an inflammation as the point of inception. This fact is suggestive, and its inculcations should not be disregarded. It strikingly illustrates the folly of temporizing in all grave maladies; and affords the highest presumptive evidence against the expectant plan of treatment, which reposes upon the medical powers of nature, while disease, none the less destructive, from its insidious character, is stealthily settling down upon the vitals. The point is this, that tubercular disease in its multiplied forms and various complications, is, in large measure, the sequel to an inflammatory attack, which might and ought to be relieved by depletory measures so decisive, as to render the cure complete; and its great prevalence and fatality may be attributable to the existing popular prejudice against the only efficient means of subduing it in its incipiency.

SUCCESSFUL REMOVAL OF A POLYPUS OF THE LARYNX.

By P. W. Ellsworth, M. D.,

Of Hartford, Connecticut.

Mrs. E. K., of Vernon, Connecticut, the subject of the morbid growth of which we are about to write, is 36 years of age, of rather small stature, and healthy, except so far as affected by the condition of her throat. Being of a consumptive family, she long considered her cough, pain in chest, dyspnœa, and hoarseness, as precursors of the malady which had carried off her relatives, and as no one had suspected the real difficulty, had anticipated but a short life. Seven years ago, hoarseness began to manifest itself, speedily followed by feebleness of voice. Symptoms continued to increase until she was seen by A. R. Goodrich, M. D., of Vernon. Not to be prolix, these symptoms will be tabulated, as they are very interesting and strongly mark the case, which are typical in every particular.

Hoarseness, quickly succeded by *aphonia*.

Cough: Slight, quick, and short, but never so severe as to draw particular attention.

Inability to snuff through nostrils for two years past.

Sense of suffocation, commencing three years ago, increasing and always coming on at night when spontaneous, but instantly excited by walking or talking, and rendered worse by the recumbent position. This symptom has been much worse during the past winter, during which she had several pretty hard paroxysms of dyspnœa, and about the 9th of February, one attack so severe as to render her unconscious and apparently dead for a brief time.

A valvular sound on expiration, resembling the noise made by uncorking a bottle, but much fainter.

Deglutition not impeded, as to fluids or solids.

Feeling of fulness in larynx.

Dyspnœa much increased by light pressure on larynx.

Copious hæmorrhage once, on the night of the severe attack, when she expectorated a pint of florid, apparently arterial blood, whereby the congestion was relieved and her life saved, though appearing at the time a very alarming occurrence.

It will be noticed that the symptoms stated above entirely corroborate the views presented by Dr. Gurdon Buck, in his elaborate and excellent monograph on this subject, in the Sixth Volume of the Transactions of the American Medical Association.

Mrs. K. was seen by Dr. Goodrich at the time of this last severe strangulation, viz., Feb. 9th, 1867, in the night. The history of the case being laid before him, he at once came to the conclusion that there was an unnatural growth or obstruction in the larynx or trachea. When the case was stated to me, my own opinion coincided with his.

Circumstances prevented my visiting Mrs. K. until the 19th of February. During this interval she was comfortable if perfectly at rest and unexcited. On the 19th I saw her, in consultation with Drs. Goodrich and J. B. Lewis, late Surgeon. U. S. V. The laryngoscope was applied to the fauces of Mrs. K., who quickly tolerated the instrument, and permitted a fine view of the upper part of the larynx. A fleshy mass, light-colored, and much resembling in shade the surrounding parts, was seen protruding into the rima glottidis, rising and falling with each expiration and inspiration. The portion seen appeared to be about the size of the end of the forefinger and to completely plug up the glottis. Respiration was excessively labored, and but little air could pass.

It appeared to us very rash to attempt removal of this body through the mouth, for the parts were of course very sensitive and unaccustomed to any manipulations. Moreover, the size of the polypus and the extent of adhesion not being fully known, there was danger of impacting it in the fissure, producing instant death; and had it been torn off by the probang, it is questionable whether death might not have resulted, as in the 28th of Buck's list, where a loose polypus caused death before it could be extracted. Mrs. K. herself expressed a wish that an external incision should be made, fearing the effects of any application to the glottis.

Our patient prepared herself for the operation with great resolution, and bore it with astonishing fortitude, as no anæsthetic could be used for fear that the already oppressed breathing might cease altogether. But painful as it was, she expressed herself as suffering nothing in comparison with the distress of the night of the 9th, when she nearly perished of suffocation.

Mrs. K. was placed in a common chair, with her face to the window, her eyes being protected from the sunlight; this was done that the laryngoscope might be more readily used after the operation. Her head rested on the breast of an assistant, who also steadied it by his hands. On throwing back the head, in order more perfectly to expose the throat and render the parts tense, dyspnœa was much increased by the pressure on the larynx, so that it was very distressing.

As speedily as possible, an incision was made from near the os hyoides to within an inch of the top of the sternum, a length absolutely necessary to secure free access to the windpipe, as her neck was short, rather full, and a very little swollen upon the throat. The air-passage was completely exposed from a little above the top of the larynx to the bottom of the cricoid cartilage. The bleeding was not profuse, no vessels requiring ligation. What there was, was principally venous, from retarded circulation through the lungs. As respiration was so painful, without wasting time to staunch the blood, I opened the circo-thyroid ligament, split up the thyroid cartilage a half-inch, and pried open the fissure with the handle of the scalpel, so as to admit air, which rushed in and out with great force. Waiting a moment, to permit the patient to be refreshed by the first free draught of air she had had for years, the thyroid cartilage was divided through its notch by a blunt-pointed curved bistoury. This cartilage cut readily, though a pair of strong scissors had been prepared, had it proved too tough for the knife.

On making the first incision, the polypus had shown itself in the fissure as low down as the bottom of the thyroid cartilage, but on completing the incision it pressed into the wound, as if about to escape from the larynx. Separating the sides of the laryngeal wound, the object of our search appeared, nearly filling the larynx and extending from the crico-thyroid ligament to a point above the notch in the top of the larynx. It was readily seized by small polypus forceps, and as its attachment was by a small and long pedicle, it was very easily and completely detached. The operation to this point occupied about eight minutes.

On pressing a sponge on the wound so as to preclude the passage of air, respiration was readily effected through the glottis.

As soon as the flow of blood had ceased and the trachea had freed itself of the blood sucked in during the operation, we proceeded to make an examination of the larynx by the laryngoscope, a thing of easy accomplishment, for on throwing back the head very far and removing the curtain from the window, the sun's rays were thrown well up into the larynx, and by pressing the laryngoscope deep into the wound, all the interior of the larynx was brought into view, the rays being reflected up, instead of down, as is usual. Not a vestige of disease could be discovered, while the pouches of the larynx could be seen dilating with every respiration, like the swelling of the throat of the toad.

The vocal apparatus appeared perfectly smooth and healthy. The polypus had probably sprung from the left upper vocal cord, from which it depended, sinking as low as the crico-thyroid ligament. Of this, however, I am not positively sure, as the point of origin was not clearly seen, and the pedicle broke before its attachment had been fully explored, but the direction of the pedicle and the non-appearance of any roughness below indicate very well that the place stated was the starting-point of the growth.

The polypus is of a fleshy consistence, about the size of the last joint of the little finger, rough, with large flat granulations, and apparently closely resembles the one removed by Prof. EHRMANN, of Stratsburg. The polypus as now preserved in alcohol, does not appear as large as when in situ, as it is condensed by the fluid in which it is preserved; it, however, now measures three-fourths of an inch in length and half an inch in breadth, tapering toward each extremity.

It was not considered advisable to leave any definite opening into the larynx for the purpose of re-operation, as the glottis was entirely free from disease and had suffered nothing during the operation. The only danger was from the spread of inflammation to the rima glottidis and surrounding parts, and this was small. The wound was therefore closed by adhesive strips only, allowing a slight oozing of blood as raised from the lungs on coughing.

Respiration was perfectly easy, a little air escaping at the wound. When I left my patient, three hours after the operation, she was breathing as freely as ever in her life, and sat up, nursing her infant three months old. She said, that but for the smarting of the wound, she could get up and take hold of housework.

Dr. GOODRICH, a highly intelligent and judicious practitioner, took charge of the case and daily transmitted me an account of its progress; this was so satisfactory that no further attention was demanded on my part, and I did not see her again until completely cured.

The doctor reports as follows:

"The wound was kept wet, at first with water, and afterward with the saturnine lotion with laudanum. A few drops of MCMUNN'S elixir of opium quieted all irritation and tendency to cough. Mucilaginous drinks were given in small quantities at a time, also nourishment in the form of broth. Small pieces of ice in the mouth greatly refreshed the patient, and in the opinion of Dr. G., aided much in the prevention of inflammation. No attempt was made for three days to swallow solid food. Deglutition was very

painful the first day, less so on the second, and easy on the third.

"Her sleep has been quiet and refreshing every night since the operation, and she finds the recumbent position very easy. On the third day air ceased to pass through the wound and her voice returned, while the pulse stood at 70, the wound apparently healing finely.

"29th. Ten days after the operation, Mrs. K. is entirely well, voice perfect, and she expands her chest from the bottom with an ease and sense of refreshment delightful to her. The whole wound is healed by the first intention, there having been scarcely the appearance of pus externally or internally, and our patient is able to attend to her household duties, simply protecting the throat from the vicissitudes of the weather by a plaster. Recovery has been speedy and all that could be wished for or desired."

This case is one of peculiar interest, not only because of its rarity, but because its clearly marked symptoms characterize it as typical, that is, as possessing all and only the symptoms belonging to a moveable benign polypus, one of all others most amenable to treatment. Demonstration was rendered complete by the laryngoscope, which never did better service. Thus the nature, situation, and probable attachment of the polypus being known, its easy motion rendering a small pedicle probable, an operation could be attempted with almost the assurance of success.

Dr. Gurdon Buck, of New York, gives the history of forty-two cases in his valuable monograph. Three others beside that now reported have been brought to my notice. One was a case of sesstile tumor of an epithelial character in the larynx of a boy who died last year in Hartford. A lady, after suffering several years, expectorated a polypus with a long slender neck, which had sprung from the larynx. A boy died in Massachuseits, several years since, of suffocation, and a post-mortem examination revealed a laryngeal polypus.

I find in Dr. Buck's statistics but a single instance where the form and nature of the morbid growth was such as to warrant hopes of permanent recovery, after removal by the knife.

The efforts of Dr. Buck in his case would have been crowned with success had he had my patient to deal with, but the nature of the morbid growth was different, and the necessarily protracted and severe manipulation rendered final success very uncertain. Dr. Green's cases can hardly be called similar, as the nature or situation of the polypi admitted of removal through the mouth.

Three other patients have been operated on in New York since Dr. Buck's, which was treated by him on the 3d of May, 1851. Only one of these has been reported. These patients, Dr. Buck informs me, had tumors with sesstile bases. With such an attachment, complete removal is next to impossible. Such seems to have been the case with all these, as the disease manifested itself again in one, requiring a second operation, and as the others have not been reported, it is probable that the success was not entirely satisfactory.

Hospital Reports.

Jefferson Medical College,
December 29, 1866.

Surgical Clinic of Prof. Gross.

Reported by Dr. Napheys.

Strumous Abscess.

Clara B, æt. 12. She has a large posterior curvature well down in the dorsal region, which came on when she was between three and four years old. The parts are now consolidated; the chasm in the vertebræ bridged over with callus. Now she has an affection which made its appearance two months ago, engrafted upon a constitution not very strong and the seat of a scrofulous taint, as indicated by the Pott's disease of the spine, which existed at a former period, now perfectly well. There is a large swelling and great prominence on the outer and upper portion of the right thigh, with discolorations extending over a considerable space and some enlargement of the subcutaneous veins. The hand also shows greater heat over the swelling than there is above or below. There is, therefore, inflammation present. She has some pain in the part, which does not prevent her from sleeping at night, and is, therefore, not decided nor persistent. Her hands and feet are always cold. She is thin. Her eyes are black, complexion rather delicate, and hair darkish.

The finger, when applied over the swelling, sinks in very readily on pressure. The moment the finger is removed, the parts resume their former condition; there is great elasticity. The finger of both hands being applied on opposite sides, distinct fluctuation is obtained. The question therefore arises, what is the nature of the fluid here present? Is it blood, water, or pus?

If it were blood, its existence would imply the infliction of violence or the rupture of some of the blood vessels of the part, either spontaneously, or as the result of injury or disease. There is nothing of that kind; the disease came on without any assignable cause; no injury at all was inflicted.

In regard to an accumulation of water. The disease is of two months standing, and there is no reason to believe from its history it is of this character. It would imply the existence of a cystic tumor, or of an accumulation in the connective cellular tissue beneath the skin, or amongst the muscles, consequent upon external

injury, as sometimes occurs. The swelling is not serious.

Then comes the consideration as to its being pus. It is doubtless of that description. Of two months standing, coming on gradually, the tumor has been growing steadily with all the evidences of inflammation.

What kind of an abscess is it; is it phlegmonous, is it strumous, or tubercular, or is it pyæmic, or multiple? Taking into consideration the previous history of the case, the inference occurs that it is strumous. It is not phlegmonous, because that is a rapid affection in its formation, and attended with a great deal of pain. The disease has been very slow. It is a strumous, tubercular, or chronic abscess, and is simply a reflection of the peculiar diathesis of the system, which has prevailed probably, ever since the birth of the child, to a greater or less extent, displaying itself when she was about four years of age by Porr's disease of the spine.

The abscess is situated superficially in the subcutaneous cellular tissue, and is probably not connected with the articulation. As, however, she has had stiffness in the hip joint for seven or eight months, it is possible there may be some connection of this kind. It is a very large abscess. She has had no chills in the afternoon and evening, and no night sweats.

This abscess is lined by a pyogenic membrane, formed out of the fibrin or lymph of the blood as a result of inflammation, in which the pus is contained, and by which its diffusion among the surrounding structures is prevented. Such an abscess may exist for many months without awakening any very considerable degree of constitutional disturbance or sympathetic derangement, so long as it is permitted to have its own course. But when it is interfered with, when an opening is made into it so as to allow ingress of the air, then severe constitutional symptoms are excited, followed by hectic irritation or hectic fever, in other words, by night sweats, by great depression of the system at large, a sort of typhoid condition, and sometimes by colliquative diarrhœa. When these symptoms obtain, there is great danger as to the life of the individual. It is this state of things which occurs during the later stages of pulmonary phthisis, in joint affections, and in scrofulous disease of the bones, especially of the smaller bones, and of the articular extremities of the long bones.

The question arises, what is to be done? The matter is making rapid progress, increasing in quantity, and by its pressure producing in the skin unnatural heat, discoloration, and a congested condition of the blood vessels of the part, especially of the veins. There is a tendency to ulceration, which is hastened or promoted by the pressure which the pus itself exercises on the skin, and if the parts are permitted to remain in this condition, the pus will find a vent for itself in the course of the next ten or twelve days.

It is proposed to anticipate this opening by making an incision at the most dependent portion of the abscess, so as to give free vent to the fluid as fast as it is deposited within the pyogenic sac, and then, by means of pressure made by adhesive strips, to bring together the opposite surfaces of the abscess, and in this way diminish its cavity, and, at the same time, guard against the introduction of air as much as possible. The air itself, is comparatively innocuous, but when brought in contact with the pus in the abscess, it leads to its decomposition, and thus converts it at once into a source of irritation. The opening will be closed afterwards with adhesive plaster; if the edges should unite, it will be very easy to make another incision. Immediately after the operation, the child will take twenty-five drops of laudanum, to prevent undue reaction. Then it will be well to put the girl upon the use of quinine and aromatic sulphuric acid, two grains of the former and twelve drops of the latter, four times a day.

The incision was made at the most dependent portion of the abscess, and eighteen ounces of strumous pus obtained, differing altogether from the matter found in the phlegmonous and pyæmic abscesses. It contained a large quantity of fatty matter, and a great many peculiar flakes looking very much like soft boiled rice, like the matter expectorated when caverns form in pulmonary consumption, the kind of pus noticed by Hippocrates. The edges of the opening were transfixed by a pin and closed by the twisted suture.

The operation may be repeated in a week or ten days, and finally, when the system has become inured or accustomed to the suffering, then the abscess should be laid open freely and a tent inserted into the bottom so as to promote healing by the granulating process. Or, instead of this, a seton may be passed through the walls of the abscess, and retained there for twenty-four hours to excite a certain amount of inflammatory action. Or again, some irritating fluid, as, a weak solution of the tincture of iodine, may be injected. It is preferable to try and open the abscess freely; not immediately in most cases, though sometimes when situated superficially it may be done at once. She was ordered a nutritious diet.

This is a beautiful illustration of the chronic form of abscess. The pus obtained, if allowed to stand, will separate into two portions, the thiner, will collect on the surface, and the thicker, the cheesy tubercular masses, will subside to the bottom, and when the parts have been sufficiently settled, the supernatent fluid will be found to posesss a sort of oily appearance.

Anal Fistule.

Wm. G., æt. 48. Tailor—a cutter. About eleven weeks ago he had an anal abscess. It was about three weeks before the abscess opened of its own accord. It did not discharge much; he suffered a great deal of pain, though there was not much swelling. He was able to walk about, during these three weeks, and to sit without much inconvenience.

This patient has fistula in ano, of which an abscess is always the precursor. There are two kinds of anal abscesses; one phlegmonous, similar to an abscess which occurs in any part of the body, the symptoms of which are acute, well characterized, and the pus of a peculiar consistent character, of a whitish cream-like appearance, and containing an immense number of globules, but comparatively little fatty matter. The other abscess which may occur here, is the scro-

fulous, tubercular, strumous or chronic, of which the case of the little girl, just referred to, presented an example; such an abscess is only liable to form in persons who are predisposed to pulmonary consumption, or who are laboring under it. It is connected with a tubercular deposit in the mucous follicles of this lower portion of the alimentary canal, which gradually softens, disorganization takes place, and an ulcer forms at length. This ulcer becomes a source of irritation, which is transferred by degrees to the tissues around the wall of the bowel, and thus an abscess is formed of the character mentioned.

This man has had no habitual cough; no shortness of breath; no night sweats; no loss of flesh. Tongue clean; bowels regular. He had probably a phlegmonous abscess; which lasted about three weeks, before it formed an opening for the discharge of its contents.

The parts were examined with the view of determining the peculiar nature of the case. In order to do this, it is necessary to introduce a probe into the external opening of the fistule. Instead of this a grooved directer was used, as that is to be employed to perform the operation. The grooved director, as well as the left index finger was oiled, the instrument was inserted along the track of the fistule, at the same time that the finger was passed into the interior of the bowel. The fistule was found to be complete, the instrument entering the interior of the bowel. There is but one external opening; one sinus and one internal opening.

There are two forms of incomplete fistules. One, in which there is an external opening leading to the bowel, but not passing through its wall, which is called the external, incomplete, or the external blind fistule. Then there is an internal fistule, in which the opening passes through the wall of the bowel, into the connective cellular tissue around it, but does not open on the external surface of the skin; this is called an internal, incomplete, or internal blind, or internal occult fistule. The complete fistule is that most frequently met with. There may be but one external opening, or there may be as many as three, four, or even seven, as in a specimen in the cabinet of Prof. Gross, in which there are not less than seven openings, so that the surface around the anus presents a sieve-like or cribriform appearance. When there are several external openings, they generally communicate with the main sinus, but sometimes open separately into the bowel. The internal opening is generally single, sometimes there are two, sometimes three, which is very uncommon. It is situated immediately above the internal sphincter muscle, at the height of about, four, five or six lines above the verge of the anus, sometimes not more than three or four lines. It is not high up as was formerly supposed by the older pathologists and surgeons, but just above the verge of the anus. In former times, the operation for anal fistule was a most barbarous, cruel, painful, and dangerous one, in consequence of the supposition on the part of the surgeon, that the internal opening passed high up; hence, the bowel was slit open, to that extent, a procedure not only painful, but frequently dangerous from the loss of blood, and always entailing a protracted cure.

When there are a number of external openings, as not unfrequently happens in cases of long standing, then the parts are callous, from interstitial deposit of plastic matter, and usually in a state of more or less irritation, or constant inflammation, attended with a great deal of discharge of mucous, and fæcal matter.

The diagnosis of an affection of this kind can always be readily determined by careful exploration, with the finger and probe. As a preliminary step, the bowel should be cleared out by the administration of oil, the previous evening, or by an enema.

The way in which the operation is usually performed, is to introduce the index finger into the bowel, and then to insinuate a probe-pointed bistoury along the fistule, and when the point comes in contact with the finger, to cut from within outward, by withdrawing the finger and instrument together. An incomparably simpler process is to divide the structures with a knife passed along a groved director, which has been introduced into the sinus, and its extremity brought out through the internal opening and placed against the opposite buttock.

The operation was performed in the manner indicated. In such a case as this of comparatively recent standing, it is not necessary to pare the edges of the incision, which is never to be neglected when the parts are callous. A little tent was inserted to insure healing by the granulating process from the bottom, which may be retained until free suppuration takes place. The bowels should be locked up for at least three days, when an enema may be administered, or a dose of castor oil, or sulphate of magnesia, or rochelle salts given. The patient should observe great cleanliness, and wash the parts after the tent has been removed, several times in the twenty-four hours. The diet should be simple, nutritious and not calculated to distend the alimentary canal. Patients usually get well in from a fortnight to three or three and a half weeks.

Medical Societies.

N. Y. MEDICAL JOURNAL ASSOCIATION.

Reported by E. H. M. Sell, M. D.

The Syme Operation as a Basis for an Artificial Foot.

At a regular meeting of the "*New York Medical Journal Association*," Dr. E. D. Hudson remarked upon "The value of Syme's Amputation at the Ankle-Joint, in adaptation of an Artificial Foot," as follows:

No amputation of the inferior extremity can ever compare, in its value to the subject, with that of the ankle-joint originated by Mr. Syme. Twelve years of experience with that variety of operation has afforded me assurance that it is not capable of being improved in its general character. It is scientific; practically of the

utmost use, and subservient to the best interests and happiness of the patient.

Mr. FERGUSSON avowed that he "knew of no kind or style of amputation which deserved more high considerations; and so far as the subject is concerned, it is one of the greatest improvements in modern surgery." No other operation has resulted so beneficially and satisfactorily. The subjects of such an amputation scarcely realize their loss with a proper artificial appliance. They appear every way whole.

The sensations of the stump are normal; the articular surface and thickened tissues are accustomed to the hardest service, and to bear the heaviest burdens, which, with apparatus, enables the patient to engage in his accustomed walks and vocations with unabated naturalness and endurance. One gentleman, for whom I applied a foot, has walked thirty-five miles in a day, on a hunting excursion, while his companions did not suspect that he was otherwise than whole. So beneficent have been the results of this operation, as to have induced many a sufferer from congenital malformations, varieties of talipes, and troublesome Chopart operations, to demand it as an "amputation of convenience."

It is an operation that has for its support the soundest principle of surgical economy. It retains, in addition to the entire length of leg, nature's foundation, the articular portion of the shaft of a long bone, as a base of support. Its accustomed service is concurrent and coequal with that of the calcaneum, to sustain the weight and forces of the body which are reflected to it. To remove the calcaneum, and substitute the articular base of the tibia, is merely a change of place, not of function. A cogent reason in support of amputation of the ankle-joint is, that to the compacted hardened tissue of the lower termination of the tibia are transferred and united for a cushion the thickened tissues, which have effectually served to protect the os calcis. The place of those tissues is changed; their accustomed function is unchanged and normal. When the change of base and healthy union of the hard and soft parts are successfully perfected, the same condition and serviceableness of the end of the stump is gained as that of the natural heel. After a very short period of exercise the sensations become perfectly natural, and the end of the stump as enduring as the heel of the natural foot. I have been led to take very great interest, and to a persistent advocacy of Mr. SYME's method, by a regard for the humane principles of rational conservatism, and by the numerous cases of ankle-joint amputations, which have demonstrated to me the superior utility of that operation to any amputation of the leg, or any modification of the general one of Mr. SYME. Of fifty recent cases which have come to my hands for final treatment by mechanical means, not one has failed of a highly gratifying success. Both patients and surgeons who have witnessed their results, have been every way pleased with their exceeding benefit. Not every subject is in immediate condition for the adaptation of apparatus, for reasons that will readily be apparent to every surgeon.

Some require treatment for ulcerations, thickened tissues, swellings, and tenderness; others require some inuring treatment before the application of apparatus. In no instance do I venture to apply apparatus until the patient can endure the end of the stump upon either the bare floor or some unyielding support with ease.

Case. Captain ——, who had suffered an amputation of the ankle-joint—SYME's method—was brought to me for treatment. I found his stump admirably well formed, and healthy, except a little prickling sensation produced by hard pressure. After ten days of preliminary treatment, during which a casement and foot were fitted, and trials made, the prickling had entirely subsided, the natural sensation of the heel was restored, and the patient went out walking without inconvenience. The sensation of prickling is no unusual complaint for persons to make, who have suffered an injury of the tissues of the heel or foot, when they have so far recovered as to begin to exercise the part. It is a mere temporary sensation, which exercise soon converts into a normal one.

The objections to SYME's operation,—tenderness, unsoundness, and unreliableness as a basis of support, after the stump has become well healed, are untenable.

The practice of Mr. SYME (original method) to exsect the indurated tissue, the most depending and most serviceable feature of the tibia, thereby exposing the cancellated structure, and also to remove the malleoli through their base on a level with its articular surface, is unphilosophical and inexpedient. The increased vascularity of the cancelli must necessarily conduce to protract the tenderness of the face of the stump. Some surgeons strive to enlarge the base of support afforded by the tibio-tarsal surface, by sawing the malleoli off, at a line transverse with the end of the tibia; but the practice is entirely unnecessary, and in some respects prejudicial. The intermalleolar space is the only true and all-sufficient base of support; any additional surface is superfluous; and by increasing the periphery of the end renders it unduly large for the adaptation of symmetrical apparatus. The articular surface should not be molested. The malleoli should be exsected with the saw, at a beveling angle of some forty degrees. The most serviceable and best proportioned stump is thus composed. With the dense ivory structure, the cancellated and medullary tissues all preserved, other matters being equal, we may rationally anticipate the best results. The modified variety of Bauden's, the dorsal flap, or that of Roux, lateral flap, will never be chosen varieties, but adopted as a dernier resort only. Even when the operation is thus modified, the stump is eminently superior for utility, and the entire pressure upon its face to any amputation of the leg. I have had two cases of the bilateral-flaps variety, made for want of plantar tissue, and cicatrized over the end of the stump, and one of the dorsal variety, upon each of which the patients bore their entire weight on an artificial foot with the utmost comfort.

The compensative apparatus I was the first to originate and apply in the United States; nor am I aware of any like legitimate treatment

abroad. With it I have invariably made the face of the stump the basis of entire support, and with no intervening substance other than one or two thicknesses of soft flannel. The apparatus is composed of a light semi-cylindrical wooden case for the leg, receiving the bulbous end of the stump in a concavity, at its lower end, fitted snugly to the posterior half of the parietes of the stump and leg, for two-thirds of its length, while its base is entirely supported. Wide leather bands lace up over the anterior half of the leg, to keep it in situ.

The case is strengthened with strong hickory pins, so dovetailed as to prevent its splitting or yielding to the weight of the body: To the leg and stump case an artificial foot of natural size and shape is attached by a strong ginglymus ankle-joint, on a line nearly parallel with that of its mate. An artificial tendo-Achillis passes up from the heel through an inclosed groove into the calf of the casement, where it is strongly inserted. It preserves the foot at a right angle with the leg part, when the weight of the body passes over and forward upon the ball and toe-piece of the foot. The latter is made to hug the ground, the same as the toes of the natural foot, by a strong lever and rubber spring. When the heel strikes the ground, the anterior part of the foot is depressed, but elevated sufficiently by rubber flexor springs, when the weight is off, to prevent tripping. The apparatus is covered with green rawhide, dried and contracted on, and coated with a neat flesh-colored enamel. It may be dressed with stocking, shoe, or boot, at pleasure, the same as its fellow. With its application, the patient is to all appearance and for usefulness, restored to a normal condition. I repeat: The great and important feature of the Syme operation at the ankle-joint is the natural philosophical base of support which the method retains, and the opportunity it affords by a sufficient shortness, for the adaptation of a compensating artificial foot, and a ginglymus ankle-joint in a proper place.

The main and defensive feature of M. Pirogoff's modification is the increased length of stump created by the excision of the tibia and calcaneum, and the annexation of a greater or less portion of the latter to the former, for the service of the "*poor man*," with the application of a "bucket" or "boot."

Every physiological anatomist must readily perceive that the increased length of the stump, by an adventitious portion of the os calcis, will, in the ratio of its increased length, necessarily impair it for the application of legitimate mechanical appliance.

Statistics furnish abundant evidence that it possesses no superior advantage as relates to mortality, sloughing, necrosis, or other untoward events, over the Syme method; *nor even as a reliable basis of support;* only to secure the benefits of an *os peg-leg*—the similitude of the wooden relic of barbarity. Science having for its true object practical and humane use, it becomes unwise for men to exercise their brains for unscientific purposes.

The special interests of the subject of an amputation of the inferior extremity are the matters of importance—"and how the patient may *most fitly* use the rest of his leg by walking on an artificial leg." No artificial leg has been or can be constructed and adapted to any stump of the leg, having its parietes for support, with such perfect favor as that which I adapt to ankle-joint amputations. The same apparatus modified may be applied to the Pirogoff modification, but the result is far less satisfactory.

I never have a patient of a Syme amputation make use of a cane, nor walk in any other than the most natural gait. There is one condition of the ankle-joint in which the Pirogoff method may be adopted to the very great benefit of the patient, viz., where caries, necrosis, or injury of the tarsal end of the tibia preclude the possibility of the Syme method, and would render the Pirogoff method a valuable alternative to an amputation of the leg at its lower third.

In any such event, to excise the diseased tibia and a sufficient amount of the calcaneum, and annex to the tibia to compensate its loss by excision, would be an additional fact to surgical improvement—a worthy expedient—but only as an alternative to amputation of the leg. It would make the leg of normal length, and alike serviceable as a Syme case for the adaptation of an apparatus.

Editorial Department.

Periscope.

The Action of Anæsthetics.

At a meeting of the Liverpool Medical Institution, January 10th, published in the *British Medical Journal*, Mr. W. Carter made some remarks on the action of anæsthetics as follows:

In August and September 1866, he performed a number of experiments to determine the physical condition of the brains of rabbits under the influence of anæsthetics. The plan adopted was to secure the animals in such a way as to exert no pressure on the veins of the neck; and then, after removing a portion of the skull by means of a fine flexible saw, to administer the anæsthetic, and watch the effect on the denuded brain. In every instance this was the same, and consisted of a change of color from pink to purple, and of a forcible protrusion of the brain-substance, which stood out as a tense tumor from a sixth to a fifth of an inch above the surface of the cranium. On allowing the animals to recover, the dark color disappeared, and the tumor subsided to the general level of the brain. There was no difference whether sulphuric ether, chloroform, or the chloric ether of the *Pharmacopœia* were used. From this it was concluded, that the anæsthetic effect depended on two causes—1. Suppressed oxidation of the blood; 2. Intracranial pressure, the second cause being probably a result of the capillary stasis always observed to follow a non-oxygenated condition of the blood. Dr. Richardson considered the phenomenon described as "coincidental, and not a cause of the insensibility as it is prominently presented."

Further observations were made by Dr. Carter on the supposed antagonism between chloroform and ether, which was not confirmed by any of the experiments which he made to determine the point. He drew attention to the extreme value of nitrous acid gas as a restorative from the effect of narcotic gases. This conclusion was arrived at accidentally, by observing its effects on a rabbit rendered insensible by charcoal fumes. The animal had been enclosed in a bin with a pan of live vegetable charcoal; and, at the expiration of an hour, was lying along apparently unconscious, but still giving a slight movement to the ear when forcibly pulled by a string tied to one of his legs. He was, therefore, left to breathe on until even this indication of remaining sensation should be absent; but, in the meantime, the manufacture of some nitrate of mercury, which was required for analytical purposes, was set going in a part of the unoccupied coach-house where the bin was placed. Fumes of nitrous acid were evolved, and speedily diffused themselves throughout the building, causing by their pungency considerable cough in those who happened to be present. After forty minutes, the rabbit was again visited under the expectation of his being found utterly unconscious, (the combustion of the charcoal continuing at the time of the previous inspection), when he was running about the bin. A note of this was made at the time, and it strikingly confirmed a statement of Dr. Richardson, that by the introduction of nitrogen into the composition, the anæsthetic action is destroyed, and that "nitrite of ethyl, like nitrite of amyl, was one of the most powerful excitants of the heart." Additional value was given to this by the entire independence of the experiments which led to it.

Pseudo-Pelvic Cellulitis or Pelvic Œdema.

In a series of articles on the pathology and diagnosis of female pelvic cellulitis, published in the *Detroit Review of Medicine and Pharmacy*, Dr. E. W. Jenks alludes to an affection which has been confounded with cellulitis, and of which, as yet, no description has been given by writers, which the author calls *pseudo pelvic cellulitis, or pelvic œdema*. The affection cannot properly be considered as either sub-acute or chronic cellulitis, yet it may be a sequel of either. As we find simple œdematous effusion taking place in the cellular tissue of the lower extremities from non-inflammatory causes, with the absence of fibrinous deposits, or the formation of pus, in dyscrasias, anæmic, organic or functional disease of some viscera, so we may find effusion taking place in the abundant cellular tissue of the pelvis. The author has recently had a case under observation, of pelvic œdema caused by a fibroid tumor of the uterus, with lateral version of the organ, producing mechanical obstruction to the circulation. This œdema had made its appearance within a very few days, and was ushered in with no constitutional disturbance, attended by no pain, heat, or tenderness. Exceptionally, pelvic œdema produced by remote causes, or inflammation in neighboring parts, may present all the constitutional disturbances of inflammation, making diagnosis almost, if not quite impossible; but as a rule, pseudo-pelvic cellulitis, or pelvic œdema, is distinguished as a local affection of the cellular tissue, without heat or pain, or the usual constitutional manifestations of inflammation, and may have as its origin, the same causes that produce like effects in cellular tissue of other parts of the body.

Dr. Jenks promises to give the results of a well marked case of this form of œdema, markedly dependent on uterine disease; with each exacerbation of the symptoms, the œdema increases, and upon relief being obtained, it nearly disappears.

Allowance of Space in Hospitals.

Mr. Hardy, in his speech to the House of Commons, paid a great compliment to the labors of the Committee of Physicians and Surgeons upon whose report he has based the recommendation to give largely increased space to the sick poor in workhouse infirmaries. * * * * * The Committee state in their report that they have taken as one of the considerations on which their conclusions are based, the fact that patients suffering from contagious fevers are to be considered as virtually excluded from workhouse infirmaries. In arriving at 850 cubic feet (not calculating therein any height the ward may have above twelve feet) as a fair space for the sick, they have been guided mainly by experience of what they consider is required for the comfort of the patient, his due management, and a proper ventilation. As contagious fevers are excluded from workhouses, and surgical operations are very rare in them, it was unnecessary to make provision for the possible spread of diseases from these sources. It has been thought right to give to lying-in women a minimum of 1200 cubic feet. Of course, as the beds in lying-in wards are rarely ever full, the actual amount of cubical space will, in most cases, be very much larger. To surgical cases the Committee give 850 cubic feet; being guided thereto by the consideration that the surgical cases in workhouses are few, and not of grave character. To patients in small-pox and fever hospitals they recommend 2,000 cubic feet. To the "chronic and infirm" class they give 500 cubic feet, it being understood that many of this class leave their beds during the day and go into day-rooms. Old people, they argue, respire less air, and therefore vitiate the atmosphere less than the young and vigorous do. Offensive cases are to be put in separate wards, and have 1,200 cubic feet each. The Committee insist that the question of cubic space is altogether subordinate to that of ventilation. They, therefore, demand above all things the adoption of a simple and effective means of ventilation, such as shall be beyond the control of the inmates. * * * They feel it to be their duty to regard the interests of the ratepayer as well as of the pauper; and have endeavoured in their conclusions to hold an even balance between the giver and receiver—to give not less than is necessary for the health and comfort of the inmates, and yet not more than what is fair to the ratepayer—in doubtful cases letting the poor have the benefit of the doubt. They have, they add, given an increase of space because they think the minimum hitherto laid down is not sufficient for healthy recovery, for decency, and proper administration.—*British Med. Journ.*

Medical and Surgical Reporter.

S. W. BUTLER, M. D., *Editor and Proprietor.*

PHILADELPHIA, MARCH 23, 1867.

MEDICAL COLLEGE EDUCATION.

During the past year the subject of medical College organization and instruction, has been discussed with more freedom than usual, in some of the leading medical journals of our country, as well as at the last annual meeting of the American Medical Association. It will be remembered by our readers, that at the meeting just named, a proposition was made to endorse the action of a Convention previously held in Cincinnati, composed of delegates from several medical Colleges in the West and North-West, which had recommended a more uniform rate of lecture fees, and the extension of the annual lecture term to six months. The discussion that followed this proposition was participated in by Dr. Storer, of Boston; M. B. Wright, of Cincinnati; Worthington Hooker, of New Haven; N. S. Davis, of Chicago; and others. It was claimed by the last named gentleman that the evils connected with our present system of medical instruction, could not be remedied by simply lengthening the annual lecture terms and adopting any given rate of lecture fees.

However proper these measures might be, their influence would not reach the real source of most of the evils of which the profession complain, namely, the graduation and admission into the ranks of the profession, of young men whose general education, mental discipline, and medical attainments, are all extremely defective. These result, not from the rate of lecture fees or the length of the lecture terms in our medical schools, but from the three following sources:

First. The entire absence of all provision for securing any standard of preliminary education before entering upon the study of medicine.

Second. The equally entire absence of all provision for securing a proper method and order of progress in the study of medicine itself. And,

Third. The shortness of the lecture terms, and the insufficient means for clinical instruction in many of the schools.

He represented the two first as *radical faults*, entering into the very foundation of our present system of medical college instruction, and vitiating all its practical results. They were violations of the most important principles, universally recognized in all other departments of education, in this and all other civilized countries. If a young man applies for admission to any literary College, or even High School, he is straightway subjected to an examination sufficient to test his knowledge of the elementary branches of learning. And why? Simply because it is assumed, on the plainest principles of common sense, that a knowledge of the elementary branches is essential to a proper understanding of the higher and more intricate. It is assumed that a knowledge of arithmetic, grammar, geography, etc., must prepare the way for the higher mathematics, philosophy, history, rhetoric, etc.; and that a certain degree of mental discipline and habits of study are necessary to enable the student to make adequate progress in his collegiate course. In our present system of medical education, all this is ignored, and whoever presents himself with the required fee is admitted to our medical colleges, without even an inquiry whether his mind has been disciplined by an hour of previous study, or whether he is capable of constructing two sentences grammatically or not. The absence of any provision for securing a proper method and progressive order of study after entering the medical colleges, developes evils equally palpable and mischievous. It bewilders the student by crowding daily upon his mind too great a variety of subjects, and by presenting them in a perfectly heterogeneous order; while it strongly encourages superficiality of attainments, and constant efforts to comprehend the practical departments to the neglect of the more elementary. If the faculty of any of our literary colleges should throw their freshmen, sophomore, junior and senior classes, all into one grand class, and undertake to drill them one hour on some study belonging to the freshmen year; the next hour on one belonging to the senior year; the third hour on one belonging to the sophomore year; and so on, all the world would regard them as better fitted for a lunatic asylum, than for teachers of youth. And yet, this would be exactly parallel to what is done, with one exception, in all the medical colleges in our country. The student just commencing his professional study, and not yet familiar with the naked bones of the skeleton, is placed side by side with the one who has studied two, three, or four years, and both listen, during each day, to lectures on histology, the elements of chemistry, physiology, and materia medica, interspersed with those on the details of practical medicine, surgery and obstetrics.

The attempt to include an adequate course of instruction in the various branches of medical science in five or six lectures per day for sixteen or eighteen weeks, is not much less objectionable, than

the heterogeneous order in which the instruction is given. He stated that nothing short of a full and careful revision of the whole system of medical college education, could remove the foregoing defects. Such revision should be founded upon the following fundamental propositions:

1st. A fair degree of general education and mental discipline is necessary to enable any young man to study medicine understandingly.

2d. A knowledge of the elementary branches of medicine, such as anatomy, physiology, etc., is essential as a preparatory step to the profitable study of practical medicine, surgery, etc. Hence a successive order of studies is as necessary in the study of medicine as in general science.

3d. The number of professorships, and the length of the annual lecture term in each college, should be such as to ensure a complete discussion or review of all the legitimate branches of medical science.

To place the system of medical college instruction in our country upon these self-evident propositions, would require the universal adoption and enforcement of a reasonable standard of preliminary education for the medical student; the division of the whole field of medical science into about twelve branches, *four* of which should be assigned, in proper order, to each of the three years required for medical study; the requirement of three courses of lectures instead of two, with thorough examination of the student at the end of each course, on those branches belonging to each year successively; and an increase of professorships in each college corresponding with the whole number of branches to be taught, with an annual lecture term of not less than five full calendar months. To perfect and carry into practical operation a revision of our system of medical education, so important to the honor and usefulness of the profession, requires a free interchange of views, and an honest concert of action among those connected with the medical colleges throughout the whole country. It cannot be accomplished by resolving here in this Association that the college fees ought to be uniform, or that the annual lecture term ought to be five, or six, or seven months. The speaker reminded members of the Association that almost every volume of their Transactions for the last sixteen years contained resolutions of the same import, as those now under discussion. If anything of practical value was accomplished, it would have to be done by the college faculties themselves.

He therefore moved as a substitute for the resolutions under discussion, the following resolutions.

"*Resolved*, That this Association earnestly requests the medical colleges of the country to hold a convention for the purpose of thoroughly revising the present system of medical college instruction, and that a committee be appointed to aid in carrying this resolution into effect."

In accordance with this recommendation a meeting of professors and teachers in our medical colleges has been called to convene in Cincinnati, on the — of May, before the meeting of the association. We trust that this meeting will be fully attended by representatives, from all our colleges, and not be a mere formal affair, but that some conclusion will be arrived at, and a course adopted that will tend to permanently benefit the cause of medical education. The principles enunciated by Dr. DAVIS, at the last meeting of the association, as reported above, seem to us sound and worthy of due consideration.

PASSAGE OF AN ANATOMY ACT IN PENNSYLVANIA.

Within the last week the Legislature of this State has passed the following important act, which, it is understood, will receive the approval of the Governor:

An Act for the Promotion of Medical Science, and to Prevent the Traffic in Human Bodies.

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, that, any public officer having charge or control over the same, within the limits of Philadelphia and Allegheny Counties, shall give permission to any Physician or Surgeon of the same county, upon his request made therefor, to take the bodies of such persons as are required to be buried at the public expense, to be by him used within the State for the advancement of Medical Science, preference being given to Medical Schools, public and private; and said bodies to be distributed to and among the same, equitably, the number assigned to each being proportioned to that of its students; provided, however, that if the deceased person, during his or her last sickness, of his or her own accord, shall request to be buried; or if any person claiming to be, and satisfying the proper authorities that he is of kindred to the deceased, shall ask to have the body for burial, it shall be surrendered for interment; or, if such deceased person was a stranger or traveller, who died suddenly, the body shall be buried, and shall not be handed over as aforesaid.

SECTION 2. Every Physician or Surgeon before receiving any such dead body, shall give to the proper authorities surrendering the same to him, a sufficient bond that each body shall be used only for the promotion of Medical Science within this State, and whosoever shall use such body or bodies for any other purpose, or shall remove the same beyond the limits of this State; and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding five years, at hard labor in a county jail.

Similar legislation has been three times, at least, urged upon our Legislature before, unsuc

cessfully. Misunderstanding, prejudice, and technical delays, have defeated it. This time, the College of Physicians, of Philadelphia, upon the motion of Dr. W. S. Forbes, gave its official sanction to the effort. A committee, consisting of Drs. Forbes, Agnew, and H. Hartshorne, visited Harrisburg on behalf of the College. Especially through the exertions of Senator Wilmer Worthington, M.D., the act was rescued from burial in Committee, and passed through the Senate. In the House, it was called up by Mr. Freeborn, and passed within a few days. Thus one of the obstacles to medical teaching in Philadelphia is removed, and we are, in this respect, on the same footing as New York. It is a not uninteresting fact, that the passage of a similar bill, the "Warburton Act," by the British Parliament, more than thirty years ago, followed the agitation resulting from the discovery of the murders perpetrated by Burke and Ware to obtain subjects for sale, at lower prices than, from want of this bill, they have lately commanded here.

SUMMER LECTURES at the UNIVERSITY.

After the decided success of the last season, it may be considered that the Auxiliary Course, endowed by the generosity of Dr. Wood, is no longer an experiment. Lectures may now be attended upon Medical Jurisprudence, Hygiene, Comparative Anatomy, Botany, and Geology, not unworthy of the Institution, and adding largely to the scientific resources and culture of the graduates of the University. We should suppose that the importance of the subjects taught, and the reputation of the Professors, would induce a large attendance also of graduates and students from other schools, as well as of non-professional men. The course begins on the first of April this year.

Correspondence.

DOMESTIC.

Commencement Exercises of the College of Physicians and Surgeons of New York.

New York, March 15th, 1867.

Editor Medical and Surgical Reporter:

As veracious chroniclers of the times, it becomes us to note that the staid and highly respectable College of Physicians and Surgeons has latterly yielded to the progressive spirit of the age, and gone the whole figure, brass band and large hall included. Until recently, the enthusiastic fledgelings have been compelled to restrain their hilarious ardor for musical accompaniments to their farewell exodus, and accommodate their friends and relatives as best they might within the narrow confines of the college building or some neighboring church. One of the professors was usually the orator of the evening; the subject either eulogistic or ornately professional, differing but little from an every-day lecture in being a trifle better dressed for the occasion. In 1859, we noticed a slight innovation in the introduction of a valedictory address by a member of the graduating class. This was a step in the right direction, but still our staid and orthodox faculty pertinaciously refused to grant the luxury of "brass bands" and "big balls" to relieve the tiresome monotony of the exercises and throw a veil of cheerfulness around the pangs of separation from the "Alma Mater." "Mais nous avons changé tout cela," and the old college, having long led the van in medicine, now gracefully consents to the social requirements of the age. And thus it came to pass, that last evening we had a very good time generally, both musically and intellectually.

At 7.30, P. M., the capacious and elegant hall of Steinway, yet resonant with the entrancing notes of Parepa, and dulcetly suggestive of pleasant melodious memories, was again crowded with a galaxy of beauty and intellect.

By a very excellent arrangement, those most interested in the proceedings were provided with reserved seats, the galleries and rear seats being opened to the public at large.

The auditorium was densely packed with the expectant friends of the successful aspirants to medical honors. A rectangular spot of red cushions was as yet unfilled, and the immense platform bristled only with ascending tiers of empty chairs rising in a great semi-circle, one above another, in solemn and respectful silence, quite befitting the momentous occasion. Meanwhile the band discourses with dulcet plaintiveness, and anon exhausts itself in a grand harmonious crash—and all again is still. Now, by the premonitory hum and flutter of that fair and gifted concourse we feel, even in our osseous system, that something is about to happen. Down the broad aisle, with quiet subdued step come the young doctors, atoning for their proverbial negligent seediness in apparel by appearing in unexceptionable broadcloth, and with immaculate cervical and hectoral vesture. Proud fathers and delighted mothers gaze with fond affection as the dear youths rapidly fill the blank spot of red cushions. Simultaneously, under the glistening pipes of the great organ at the left of the platform, there enter, amid storms of applause,

the trustees and faculty of the college, and with them a goodly array of distinguished medical men and *literati* not directly connected with this institution.

Among others, we notice Prof. JAMES R. WOOD, of Bellevue, Prof. LEWIS A. SAYRE, Prof. PEASLEE, Dr. GOVERNEUR SMITH, son of the lamented Prof. JAS. SMITH, Dr. COCK, of obstetrical fame, and Dr. KRAKOWITZER, distinguished for his active efforts in behalf of the German Hospital, and for some time President of the New York Pathological Society.

After a prayer by the Rt. Rev. H. A. NEELY, D.D., Prof. SAMUEL ST. JOHN read the list of graduates, as follows—ninety and nine in all.

Maine—Frank Carter, Edward T. Fuller, Henry I. Jordan, A. B., Eugene B. Sanborn.

New Hampshire—Eustis F. Langdon, A. B.

Vermont—Burns Gilman, M. D., Z. Gilman, jr.

Massachusetts—Herbert C. Belden, Charles M Billings, Edward S. Eveleth, John Winslow, M.D.

Connecticut—Willis J. Beach, Morton W. Bastch, Frederick Gilmack, W. H. Palmer, A. B., Eli Warner.

New York—John W. Baldwin, Oglevie D. Ball, James A. Blanchard, Frank V. Brush, Albert H. Buck, Charles C. Buckley, Charles A. Carle, Philo W. Clark, James D. Clyde, Samuel Decker, Francis Du Bois, jr., A. B., Jonathan Edwards, jr., A. B., William S. Ely, A. B., Bache McEvers Emmel, Charles W. Ferguson, David F. Fetter, M.D., W. R. Fisher, A. M., Henry Gray, Emile Gruening, John D. Hale, A. B., Henry E. Handerson, Audley Haslett, A. M., Edward J. Hogan, Geo. F. Hollick, Charles H. Horton, E. Darwin Hudson, jr., A. B., Edward R. Hun, A. B., John J. Keater, John J. Ketchum, Wm. A. Kissam, S. Dwight Martin, Stuyvesant F. Morris, A. M., Henry E. Owen, A. B., Edward R. Post, W. H. B. Pratt, A. B., Ira Remson, Nathan S Roberts, Geo. W. Robinson, A. M., John W. Robinson, C. F. Rodenstein, A. M., Albert S. Rogers, A. De Loss Smith, Henry C. Turner, N. Berdan Van Houten, Richard C. Van Wyck, Wm. A. M. Wainwright, A. B., Peter Wheeler, W. Parker Wooster, A. B.

New Jersey—Jas. E. Cooper, Laban Dennis, Stephen M. Disbrow, Thomas L. Janeway, A. M., Samuel Johnson, Wm. C. McFarland, Albert R. Randol, Thomas Edward Satherwaite, A. B., Thos. Terrill, jr., James Vanderpool, James V. D. Van Nest, A. M.

Pennsylvania—Warren Schoonover, A. B.

Maryland—Geo. Wells, jr.

North Carolina—Josiah P. Sugg.

Alabama—John H. Murfee.

Mississippi—T. Sidney Scales, A. B.

Kentucky—Jas. F. Peyton, Silas O. Witherbee.

Ohio—Fred. W. Elberg, A. M., Martin Hagan, M. D., Stephen J. Hutchinson, Charles R. Sanderson, M. D.

Indiana—Theo. F. Alverson.

Missouri—John O. F. Delany, Henry Henderson, A. M.

Minnesota—Geo. W. Murdock.

Nova Scotia—Thos. R. Almon, Fred. S. Barclay, Fred. S. Clulman, Charles S. Des Brisay, James N. Fitch, A. B., Daniel De W. Harrington, Wm. M. Lyttleton, David H. Muir.

New Brunswick—Harry Grove.

The stage not being large enough to hold them all, they were separated in four detachments, and duly made acquainted with the Latin contents of their diplomas in quarter-sections, but took the "oath" undivided, standing in their places in the body of the hall.

President DELAFIELD then bid them "God-speed" in their calling, and another burst of lively melody fitly followed the conclusion of this very interesting but slightly tedious portion of the exercises.

Prof. ALONZO CLARK then conferred the Harsen prizes for the best three written reports of clinical instruction in the New York Hospital. The first prize of one hundred and fifty dollars, with accompanying medal and ornamental diploma, was received by Mr. J. ACKERMAN COLES, of Newark, N. J., a worthy son of Dr. ABRAM COLES, of the same city, who is widely known as a Christian, gentleman, and poet; a skilful practitioner and an untiring student of classic lore. The second prize was conferred upon D. VALENTINE LYNCH, of New York.

The Faculty prizes, for the best graduating thesis, were then conferred by Prof. JOHN C. DALTON. The first prize was received by Mr. ALBERT H. BUCK, of New York, for a thesis upon "Trichina Spiralis." Prof. DALTON, remarked that this thesis bore evidence of considerable research, and was quite remarkable for the originality of its investigations, and the accuracy of its plates. Some facts heretofore unnoticed had been here brought to light, more especially those connected with that most obscure point, viz., the mode in which the animal makes its way through the body to the muscles.

The second prize was conferred upon IRA REMSON, of New York city, for a thesis upon "Fatty-Degeneration of the Liver." Which is distinguished for being a very complete and accurate resumé of all that is at present known upon that subject.

Honorable mention was made of the following theses:

Upon Diphtheria, by JONATHAN EDWARDS, of New York.

On the mode of ascertaining death in difficult cases, by ROGER S. TRACY, of New York city.

On Animal heat, by HENRY HANDERSON, of New York city.

Next in order came the address of the orator of the evening, the Rev. HENRY W. BELLOWS, D. D.

We say orator, perhaps reader, would be the better term, for much to the disappointment of those who know his facile power as an extempore speaker, he read his address from beginning to end, only now and then raising his eyes from his notes to impress some telling point upon his audience. However much this method may preserve the continuity of subject-matter it is quite sure to be lacking in the snap vigor and vim of an extempore effort; and just in these very desirable qualities the address, though scholarly, ornate, and elaborate, was deficient. The worthy Dr. had perhaps not anticipated that Steinway Hall, would be crowded to repletion with a brilliant and discriminating assemblage, who would be four times compelled to listen with patient decorum to the dry-as-dust "Lectari salutem," of the diplomas, or trusting to a few skeleton notes, and the inspiration of his audience, he might have given us something more inspiriting and vivacious than a written discourse.

Despite the fact that the Dr. saw fit totally to discard the pungent potency of extempore interpolations, and content to shade his renown as an eloquent and ready speaker, he was listened to with that marked attention and discriminating applause which an intelligent audience always accords to a true scholarly production.

The subject of the Doctor's address was "The learned Professions." Our space forbids anything but a very brief synopsis. He remarked that around the bed of the sick, and the dying, are to found the representatives of these three professions. The physician, to alleviate physical pains and distress; the lawyer, to set in order worldly affairs; and the clergyman to guide, support and console, by the exercise of his holy calling. These are the *learned* professions, all equally important, and requiring a special training, and devotion to study, quite unappreciated by those who have not pursued them.

In the useful or ornamental arts the public is willing to admit that a certain amount of study is necessary before one can become an expert. Not so with the learned professions. Here every one seems qualified to judge. No one finds fault with the technical terms used in the arts or trades, but not a few clamor because the physician uses a vocabulary popularly unintelligible. "Why do not"—say they—"doctors and lawyers write in the vernacular? and why even do ministers continue to use the antiquated language of the Gospels and Epistles?" We do not hear this kind of talk concerning either the useful or ornamental arts. No one thinks of setting up as his own watch-maker, or building his own steam engine, or painting his own pictures, unless specially trained for such purposes; but in our day most laymen think themselves good lawyers, and especially good doctors. It almost seems that a man who is not his own doctor at forty years of age, has no right to live any longer. In speaking of the decline of the learned professions, the Doctor remarked that medical and legal men were, to a very large degree, responsible for it, because they have, so to speak, let down the upper bars of their respective enclosures. This is more prominently seen in the present pernicious system of an elective judiciary, in which political trickery seems the only requisite for obtaining a position once honorable, because only to be reached through sound learning and probity. To these dangers he considered the medical profession less exposed. The medical profession was, in his judgment, the rising profession of our day. It was in a greener and more flouring condition than either of the others, and had less to contend with in the radical and factious spirit of the times.

As the metaphysical sciences are declining, the physical are rising. What distinguishes the present age is the study of facts. Engineering, mining, and medicine, are now the studies which are absorbing the young men of our colleges.

The Doctor, in conclusion, spoke of the great services of the medical profession during the late war. It gave him pride to think that in those times of peril, the clerical and medical profession stood shoulder and shoulder together for the good of suffering humanity. The whole medical force, without reserve, threw itself in the field, and to this day the country is but imperfectly acquainted with the sacrifices they then willingly and unhesitatingly made. It was his pride and joy to have been closely associated with medical men for the past six years, so much so, that sometimes he found himself in doubt as to which profession he really belonged. In that time he had learned new lessons of enlarged humanity, new conceptions of human culture, and had formed undying friendships.

After a musical interval, Mr. William H. Palmer, A.B., of the graduating class, delivered the Valedictory address. His subject was "The Advances of our Profession," in which he passed in rapid but comprehensive review, the great medical discoveries which make us so greatly indebted to the past, and predicted a glorious future to the medical profession. The speaker alluded in appropriate terms to the self-sacrificing benevolence of the profession, and took occasion to correct the popular fallacy that medical men

are destitute of feeling. His whole subject was admirably conceived and delivered. We regret that our brief space precludes us from giving an extended synopsis.

An the conclusion of the address the benediction was invoked; and then, as if to dispel the feeling of gloom at sundering the ties of college friendship, the band uproariously broke forth with "Lannigan's Ball;" and finally, sent the youth's into the battle of life with the inspiring strains of "Tramp, tramp, the boys are marching." And thus ended the seventeenth annual commencement of the College of Physicians and Surgeons. *Esto perpetua.* GOTHAM.

Twins weighing 17 lbs.—Post partum hemorrhage from atony of over-distended uterus—Internal application of cold—Recovery.

EDITOR MEDICAL AND SURGICAL REPORTER:

In the REPORTER of December 26, 1866, I reported a case of Embryulcia, stating that at that time the lady was again enciente. Throughout her pregnancy her health had been excellent, but the latter half of it she became of so unwieldy a size as almost to be debarred from locomotion, of course becoming somewhat alarmed herself, as well as a source of anxiety to her friends. Jan. 20, I made an external examination, and decided upon most palpable evidence, that the bulk was owing to a multiple conception.

January 30. Was summoned in haste at 8 A. M. and found that the liquor amnii had been suddenly discharged about 6½ A. M. without pain and in large quantities, without lessening her bulk. No other sign of labor present—no examination.

January 31st. First pain occurred 6½ A. M.—two more before 12 M., slight in character. First examination made 10 A. M.. Found the os fully dilated and soft, no hemorrhage, sufficient mucous discharge. Vertex presenting under right pubis. No interference was deemed necessary. The patient had taken a good breakfast, and took a light dinner at noon. About 2 P. M. the pains began to come on, with moderate frequency, but entirely devoid of force, being composed of a number of feeble impulses, while the patient at once commenced giving way, ejaculating feeble moans, and being in a half-fainting condition, with pale face and feeble pulse. There being no evidence of hemorrhage, this state of things was accounted for by the excessive fear, which increased with every pain. Nervines produced no effect. Tinct. of ergot, one teaspoonfull every 15 minutes, was then given, which increased the pain after the second dose; the alarm, however, at each occurrence still broke them up in those frisky impulses, rendering them useless. I administered chloroform to partial anæsthesia, still continuing the ergot; and now, the morbid mental condition being removed, the labor progressed well. At 4½ P. M. a fine boy, crying lustily, and weighing nine pounds, as afterwards ascertained, made his appearance, and the good nurse, struck with its appearance of size and vigor, exclaimed, "Nary twins, doctor," which assertion she however was soon forced to retract.

The membranes of the second child protruded and were broken, the ergot given in increased quantities, and the flaccid abdomen of the mother supported by the hands of the nurse. The second child presented the vertex under the left pubis and with very feeble throes, was born alive and hearty a quarter of an hour after the other. It weighed eight pounds.

Now came the chief difficulty. She had taken one fluid ounce of tinct. ergot, and the abdomen had been constantly and carefully sustained; but the birth of the second child was followed by a terrible gush of blood, deluging bed and floor, and almost leaving the patient lifeless. I instantly introduced the left hand into the uterus, and the right on the surface of the abdomen, making strong friction and pressure.

I should have stated that the umbilical cord had been carefully tied with and severed between two ligatures. The placenta (there was but one with two cords) was partially detached. I removed it entirely, immediately reintroducing my hand, as the hemorrhage, though slightly checked, was still flowing at a fearful rate. Twenty grains of powdered ergot with a tablespoonful of the tincture and five grains of sugar of lead in the meantime were poured down the throat of the almost lifeless patient.

My hands inside and outside the uterus seemed to me almost in contact, so thin had the uterine and abdominal walls become from the enormous distention (seventeen pounds of children, beside water and placenta!) The uterus felt like a wet bag. I could now control the bleeding by pressure on the aorta (plainly felt) through the back of the womb, but there was not the slightest effort at contraction.

I now had a hard snow-ball, the size of a small orange, prepared, and immediately introduced it bodily into the womb. This had the desired effect; the patient heaved a deep sigh, shuddered, and the uterus slowly contracted on my hand. I allowed it to be expelled, if the feeble impulse can be so called, carrying a large quantity of clots with it, the right hand still grasping the

uterus externally. A bandage and thick compress were firmly applied by 6 P. M.

The patient rallied very slowly. Opiates and alcoholic stimuli from idiosynocrasy disagreed with the patient and could not be employed. She remained very sick and faint till about 8 P. M., when she vomited freely about three pints of fluid dark, acid, and offensive matter.

I now ordered iced milk, which seemed just the thing; the patient took it with avidity, and every spoonful told, so that by 10 P. M. she was considered safe.

The subsequent history has nothing of interest, except the almost entire absence of after-pains and slight lochia, and to-day mother and boys are "as well as can be expected."

J. G. F. Holston, M. D.

Zanesville, Ohio, Feb 7, 1867.

Inhalation of Lime in Croup.

Editor Medical and Surgical Reporter:

Charley B., aged 7 years, awoke at 9 P. M. Feb. 6th, with a hoarse, croupy cough. The father, a near neighbour, came to my house and requested me to send some medicine. I gave an emetic of ipecac., with three grains of calomel.

Next morning (7th) I was requested to see him. Found him with unmistakable croup. The parents stated that the medicine had vomited him freely without producing any relief.

I immediately administered a piece of powdered alum, and sent for quicklime.

When the lime was procured and ready for use, the little fellow was vomiting freely. I placed the vessel containing the slaking lime under his mouth aad nostrils. In a very short time the respiration was quite easy, and the cough had lost its alarming ring.

Twenty drops syr. scillæ, with half grain antim. et potass. tart. was given every two hours, and the inhalations resorted to whenever the cough became hard and dry.

Slight febrile excitement continued for 36 or 48 hours. On the fourth day he was discharged well.

I send this brief report without comment. I hope others will give the lime a trial, and furnish the results for publication in the Reporter.

H. F. Willis, M. D.

Preston, Md., Feb. 22, 1867.

News and Miscellany.

——Dr. Railly J. Clark died at Glen's Falls, N. Y, on Wednesday, in the 90th year of his age. It is stated that he drew up the constitution of the first regularly organized temperance society in the United States, at the town of Moreau, Saratoga county, in 1808. He has served in the Legislature, and was a member of the Electoral College in 1848.

The Mortality of Bachelors.

Dr. Stark, of the Scottish Register Office, has produced a strong statistical argument in favor of marriage. Taking, as an unexceptionable average in relation to the marriage of men, the period from the twenty-fifth year to the close of life, the mean age of the married men at death was 60 2-10th years, while that of the bachelors was only 47 7-10 years, giving a man a chance of living eleven years longer if he married than if he remained a bachelor. Dr. Stark maintains that, as the army is almost entirely composed of bachelors, the mortality of soldiers is represented unfairly when it is compared with that of the civil population generally, more than half of whom are married. The comparison should rather be with that of bachelors, and of bachelors living in towns, since soldiers are congregated in masses, and usually occupy barracks in towns.—*British Med. Journal.*

MARRIED.

Bertz—Shower.—In Stewartstown, Pa, March 7th, by the Rev. J. Y. Cowhick, Theodore Bertz, M. D., and Miss Nettie, daughter of George Shower, Esq., all of Manchester, Carroll co., Md.

Hanley—Blair.—At the residence of the bride's father, Feb. 26, by Rev. Z. S. Weller, Rev. W. Hanley and Miss Sarah M. Blair, daughter of Dr. W. Blair, of Huntsville, Mo.

Neusome—Anderson.—In Iowa co, Iowa, Feb. 26th, by Rev. James Anderson, W. W. Neusome, M. D., and Miss Catherine Anderson, all of Iowa.

Percival—Jones.—Feb 19th, at the residence of the bride's parents, by Rev. J. N. Paxson, George G. Percival, M. D, and Isabel B., daughter of George T. Jones, Esq., all of this city.

Ross—Sine.—At the residence of the bride's father, March 5, 1867, by the Rev. Mr. Spruell, J. M. Ross, M.D., of Cincinnati, Ohio, and Miss Mary Sine, of Newport, Kentucky.

DIED.

Blachford—Suddenly, March 10, 1867, at Parkersburg, W Va., Beall S. Blachford, son of Dr. Thomas Blachford, of Lynchburg, Va.

Cox—March 6, 1867, at Miamitown, Ohio, after a protracted illness, Dr. Hiram Cox, long a resident of Cincinnati.

Osborn.—In New York, March 14th, of pneumonia, Elizabeth, widow of the late Dr. Thomas Osborn, aged 71 years.

Whitney.—In Chicago, Ill., March 7th, Charles T., only son of Elizabeth J. and the late Dr. William Whitney, aged 24 years.

METEOROLOGY.

March,	4,	5,	6,	7,	8,	9,	10.
Wind.....	N. E.	N. E.	N. E.	N. E.	N. E.	N. E.	N. E.
Weather.....	Cl'dy. Rain.	Cl'dy. Snow.	Cl'dy. Rain.	Cl'dy. Rain.	Cl'dy.	Cl'dy. Rain.	Cl'dy. Rain.
Depth Rain.....				1 4-10			5-10
Thermometer.							
Minimum.....	30°	29°	30°	32°	29°	30°	35°
At 8 A. M.....	36	35	32	35	35	34	36
At 12 M.....	38	38	31	36	40	41	41
At 3 P. M.....	39	39	31	37	41	42	40
Mean.....	35.75	35.25	31.	35.	36.25	36.75	38.
Barometer.							
At 12 M.....	30.	30.4	30.6	30.	30.5	30.4	30.2

Germantown, Pa. B. J. Leedom.